REMARKS

Overview

Claims 1, 3, 6, 8-16, 18, 21, and 23-35 are pending and were examined in the Office Action under reply ("Action"). Applicants acknowledge with appreciation the withdrawal of the rejection under 35 U.S.C. §112 (Action at 2). The claims have been rejected as follows:

(1) claims 1, 3, 6, 8-11, 29, 31, and 35 are rejected under 35 U.S.C. § 103(a) as unpatentable over Say et al, US 6,103,033 ("Say") in view of any one or more of Charlton et al., US 5,798,031 ("Charlton"), Maley et al., US 5,770,028 ("Maley"), and/or Hoenes et al., US 5,122,244 ("Hoenes"), with evidence from Ikeda, US 5,582,697 ("Ikeda");

(2) claims 1, 3, 6, 8-16, 17, 21, 23-31, and 35 are rejected under 35 U.S.C. § 103(a) as unpatentable over Feldman et al., US 6,299,757 ("Feldman") in view of Say and any of Charlton, Maley, and/or Hoenes, with evidence from Ikeda;

(3) claims 32 and 34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Say in view of any of Charlton, Maley, or Hoenes, and further in view of Yamashita et al., US 5,472,590 ("Yamashita"); and

(4) claims 32-34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Feldman in view of Say and any of Charlton, Maley, or Hoenes, and further in view of Yamashita.

The rejections of the claims are overcome in part by the amendments set forth herein, and are otherwise traversed for at least the reasons set forth below.

Amendments to the Claims

With the amendment set forth herein, claim 1 has been amended to recite that the first conductive track is the same width as the working electrode, and the second conductive track is the same width as the second electrode. Support for this amendment can be found in the original specification – see, e.g., Figs. 1 and 4.

Claim 16 has been amended to recite that the first conductive track is disposed on the first substrate and covers the width of the first substrate, and that the second conductive track is disposed on the second substrate and covers the width of the second substrate. Support for this amendment can be found in the original specification – see, e.g., Figs. 1 and 4.

Claim 31 has been amended to recite that the conductive track portion, the working electrode portion, and the contact portion are of the same width, and that the second electrically conductive track, the second electrode portion, and the second contact portion are of the same width. Support for this amendment can be found in the original specification – see, e.g., Figs. 1 and 4.

Claim 35 has been amended to recite that the first conductive track, the electrical contact, and the working electrode are of the same width and that the second conductive track, the second electrode, and the electrical contact are of the same width. Support for this amendment can be found in the original specification – see, e.g., Figs. 1 and 4.

No new matter is added by these amendments.

Rejection Under 35 U.S.C. §103(a)

Claims 1, 3, 6, 8-11, 29, 31, and 35 are rejected under 35 U.S.C. § 103(a) as unpatentable over Say in view of any one or more of Charlton, Maley, and/or Hoenes, with evidence from Ikeda.

For a rejection under 35 U.S.C. § 103, "the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not" (MPEP § 2142). The Action fails to meet this standard. As shown by the arguments set forth below, the preponderance of the evidence suggests that the references do not provide a *prima facie* case of obviousness.

The Action cites Say for disclosing a biosensor for determining a concentration of an analyte in a liquid sample (Action at 2), and asserts that the combination of Say with any of Charlton, Maley, or Hoenes, plus evidence from Ikeda, renders the instant claims obvious. Applicants have previously addressed this combination of references (e.g., in applicants' response dated 2/15/11), and continue to maintain that the combination does not support a *prima facie* case of obviousness. In addition, and as discussed below, the amendments set forth herein provide a further non-obvious distinction between the instant claims and the cited art.

Claims 1, 3, 6, 8-11, 29

Claim 1 as amended requires the first conductive track to be the same width as the working electrode, and the second conductive track to be the same width as the second electrode. A device with these characteristics is not disclosed in Say. For example, in Figure 2 of Say, conductive traces 52 are depicted as very thin lines or wires, while electrodes 58 and 60 are depicted as thicker regions. Say provides a number of different embodiments of sensors, and in each embodiment, the conductive traces are depicted as thinner than the electrodes. See Figures 10 and 11, for example, in Say.

Further evidence that Say does not teach or render obvious conductive tracks that are the same width as an electrode is provided by the method for preparing the devices disclosed by Say. Figure 13 of Say shows a roller that can be used as an embossing stamp for preparing devices (such as the device of Figure 2 of Say). The roller has "raised lines 211" (col. 27, line 56) that are meant to emboss the conductive traces 52. The raised lines are depicted as lines with no particular width, and certainly without the width of electrodes 58 and 60 shown throughout the Figures.

In view of the foregoing, and as further described in the following paragraphs, the combination of Say with the other cited references does not teach the limitation of conductive tracks having the same width as working and second electrodes.

Charlton is cited for disclosing that an enzyme can be deposited onto an electrode in the presence of a hydrophilic polymer (Action, p. 3). Regardless of whether this interpretation of Charlton is accurate, Charlton does not describe a first conductive track that is the same width as a working electrode and a second conductive track that is the same width as a second electrode (i.e., a teaching that is missing from Say, as explained above). Charlton describes two electrodes (39 and 40 in Figure 1 of Charlton) and a conductor pattern split into three regions (38 in Figure 1 of Charlton). Even if, *arguendo*, Charlton's conductor pattern is interpreted as the conductive tracks required by applicants' claims, Charlton does not specify any particular width for the conductor pattern, and Figure 1 of Charlton does not show widths that are equal to the widths of the electrodes. Furthermore, the conductor elements in Charlton would not be interpreted as equivalent to the conductive tracks of applicants' claims, at least because there are three conductor elements but only two electrodes shown in Charlton, and at least one of the conductor

elements is not leading from an electrode to an electrical contact associated with the electrode as required by applicants' claims. In summary, Charlton does not provide the teaching missing from Say – i.e., conductive tracks having the same width as working and second electrodes.

Maley is cited for disclosing a measuring electrode comprising a mixture of conductive particles and enzymes, wherein a surfactant material is added to the electrode (Action, p. 3). Regardless of whether this interpretation of Maley is accurate, Maley does not describe a first conductive track that is the same width as a working electrode and a second conductive track that this the same width as a second electrode (i.e., a teaching that is missing from Say, as explained above). Maley provides an electrochemical sensor having a sensor portion (e.g., item 28 in Figure 2 of Maley) and a plurality of leads (e.g., items 34 in Figure 2 of Maley). Figure 9A of Maley provides details of the sensor portion, and describes conductive strips 64, 66, 68, and 70 that are "…wide enough to define contact pads 78, 80, 82, and 84…" but are "deposited so as to be somewhat narrower, exposed regions of which may define electrodes" (Maley, col. 12, lines 35-42). Figure 9B of Maley provides electrodes 86, 88, 90, and 92, and there is clearly no relationship between the width of such electrodes and the width of conductive strips 64, 66, 68, and 70. Accordingly, Maley does not provide the teaching missing from Say – i.e., conductive tracks having the same width as working and second electrodes.

Hoenes is cited for describing an electrode containing both conductive particles and enzymes, and containing a small amount of hydroxyethyl cellulose (Action, p. 3). Regardless of whether this interpretation of Hoenes is accurate, Hoenes does not describe a first conductive track that is the same width as a working electrode and a second conductive track that this the same width as a second electrode (i.e., a teaching that is missing from Say, as explained above). Figure 4 of Hoenes provides a sensor showing electrodes 5, 6, 7, and 8, as well as leads 55, 66, and 77.[1] It is evident from the drawing that the leads and the electrodes are not the same width. Accordingly, Hoenes does not provide the teaching missing from Say – i.e., conductive tracks having the same width as working and second electrodes.

Ikeda is cited for disclosing that a reference electrode can be utilized as a trigger electrode (Action, p. 5). Regardless of whether this interpretation of Ikeda is accurate, Ikeda does not describe a first conductive track that is the same width as a working electrode and a

[1] Applicants believe that the label "9" in Figure 4 of Hoenes is a typographical error, and should be the label "6."

second conductive track that this the same width as a second electrode (i.e., a teaching that is missing from Say, as explained above). Figures 1, 2, 4, 5, and 6 of Ikeda provide sensor arrangements with working electrode 5 connected to lead 2, and counter electrode 8 connected to lead 4. It is clear from the Figures that electrodes 5 and 8 are significantly larger in width than leads 2 and 4. Accordingly, Ikeda does not provide the teaching missing from Say – i.e., conductive tracks having the same width as working and second electrodes.

A *prima facie* case of obviousness requires that the cited reference or combination of references teach each and every claimed limitation. *See Sud Chemie, Inc. v. Multisorb Tech.*, Inc. 554 F.3d 1001 (Fed. Cir. 2009). In view of the foregoing discussion, any combination of Say, Charlton, Maley, Hoenes, and Ikeda does not provide all of the limitations of applicants' claims. Accordingly, applicants respectfully request withdrawal of the rejection.

Claim 31

Claim 31 as amended requires a conductive track portion, a working electrode portion, and a contact portion that are of the same width, and a second electrically conductive track, a second electrode portion, and a second contact portion that are of the same width.

As described above with respect to claim 1, any combination of Say, Charlton, Maley, Hoenes, and Ikeda fails at least to teach a conductive track and working electrode having the same width. Furthermore, the cited references also fail to teach a conductive track portion, a working electrode portion, and a contact portion that are of the same width. For example, contact pads 49 in Figure 2 of Say are clearly wider than conductive traces 52. Also for example, contact pads 78, 80, 82, and 84 in Figure 9A of Maley are clearly wider than the corresponding conductive strips 64, 66, 68, and 70. Also for example, Figure 4 of Hoenes shows leads 55, 66, and 77 as having a variety of widths. It appears that a contact portion of such leads (i.e., the right-most region of Figure 4) is wider than the leads connecting such contact portion with the electrodes. Also for example, contact portions 2a and 4a in Figures 1, 2, 4, 5, and 6 of Ikeda are clearly wider than the corresponding leads 2 and 4. Finally, regarding Charlton, the device disclosed therein is described as having a contact region labeled 45 (see Figure 1 of Charlton). The conductor pattern (labeled 38 in Figure 1) in the contact region shows a decreased width compared with the other portions of the conductor pattern.

In view of the foregoing, any combination of Say, Charlton, Maley, Hoenes, and Ikeda does not provide all of the limitations of applicants' claims. Accordingly, applicants respectfully request withdrawal of the rejection.

Claim 35

Claim 35 as amended requires a first conductive track, an electrical contact, and a working electrode that are of the same width, and a second conductive track, a second electrode, and a electrical contact that are of the same width.

As described above with respect to claim 1, any combination of Say, Charlton, Maley, Hoenes, and Ikeda fails at least to teach a conductive track and working electrode having the same width. Furthermore, as described above with respect to claim 31, any combination of Say, Charlton, Maley, Hoenes, and Ikeda fails at least to teach a conductive track portion, a working electrode portion, and a contact portion that are of the same width, and a second electrically conductive track, a second electrode portion, and a second contact portion that are of the same width. Thus, for the reasons provided above with respect to claims 1 and 31, any combination of Say, Charlton, Maley, Hoenes, and Ikeda fails to teach a first conductive track, an electrical contact, and a working electrode that are of the same width, and a second conductive track, a second electrode, and a electrical contact that are of the same width. Accordingly, applicants respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 1, 3, 6, 8-16, 17, 21, 23-31, and 35 are rejected under 35 U.S.C. § 103(a) as unpatentable over Feldman in view of Say and any of Charlton, Maley, and/or Hoenes, with evidence from Ikeda.

Say, Charlton, Maley, Hoenes, and Ikeda are discussed above with respect to claims 1, 3, 6, 8-11, 29, 31, and 35. As stated above, these references (alone or in any combination) fail to teach sensors having, for example, conductive tracks with the same width as working and second electrodes.

Feldman describes a variety of sensor configurations in the various figures provided therein. The Action cites Figures 2, 22, and 24 of Feldman as disclosing "a first conductive track

leading from the working electrode to an electrical contact associated with the working electrode" (Action, p. 6). In fact, however, the description in Feldman does not identify any structures in Figures 22 and 24 as "conductive tracks." Figures 22 and 24 identify electrodes (labeled 580, 584, and 585 in Figure 22 and labeled 602, 610, and 612 in Figure 24), substrates, spacers, venting apertures, and the like, but no conductive tracks. Even if, *arguendo*, the elongated portions of electrodes 580, 584, 585, 602, 610, and 612 were to be considered conductive tracks (rather than portions of the electrodes, as identified in Feldman), such elongated portions are not the same width as the non-elongated portions of the electrodes (i.e., the lower portions shown in Figure 22 and the upper potions shown in Figure 24). Furthermore, Figure 2 shows only electrodes and does not show any structures that could be considered "conductive tracks."

The other figures in Feldman also fail to disclose conductive tracks, and specifically fail to describe conductive tracks that are the same width as the electrodes (and electrical contacts) with which they are associated. For example, the items labeled 23 and 25 in Figure 3 of Feldman are "tabs" for contacting external electronics, but these tabs connect to electrodes 22 and 24 without any conductive tracks therebetween.

Charlton, Maley, Hoenes, and Ikeda are cited in the Action as providing supplemental teachings to the teachings of Say and Feldman. Again, however, as described above with respect to claims 1, 3, 6, 8-11, 29, 31, and 35, these references fail to disclose devices having conductive tracks that are the same width as the electrodes that they contact.

Regarding claim 16, the claim as amended requires a first conductive track disposed on the first substrate and covering the width of the first substrate, and a second conductive track disposed on the second substrate and covering the width of the second substrate. Just as the combination of Feldman, Say, Charlton, Maley, Hoenes, and Ikeda does not disclose devices having conductive traces that are the same width as the electrodes they contact, the combination of these references also does not disclose devices having conductive tracks that are the same width as the substrates upon which they are disposed. Thus, these references fail to support a *prima facie* case of obviousness for claim 16 (and claims dependent therefrom).

For at least the foregoing reasons, the cited references fail to provide each and every limitation of the pending claims. Accordingly, applicants respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 32 and 34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Say in view of any of Charlton, Maley, or Hoenes, and further in view of Yamashita.

Say, Charlton, Maley, and Hoenes are discussed above with respect to claims 1, 3, 6, 8-16, 17, 21, 23-31, and 35. As stated above, these references (alone or in any combination) fail to teach sensors having, for example, conductive tracks with the same width as working and second electrodes.

Yamashita is cited as teaching polyethylene glycol as a "useful choice of polyalkylene oxide polymer when the property being desired is a hydratable substance" (Action, p. 8). Regardless of whether this interpretation of Yamashita is accurate, Yamashita does not describe a first conductive track that is the same width as a working electrode and a second conductive track that is the same width as a second electrode. (i.e., a teaching that is missing from Say, as explained above). Yamashita describes ion sensors but provides only cross-sectional views of individual electrodes. Yamashita does not teach incorporation of such electrodes with conductive tracks that are the same width.

For at least the foregoing reasons, the cited references fail to provide each and every limitation of the pending claims. Accordingly, applicants respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 32-34 are rejected under 35 U.S.C. § 103(a) as unpatentable over Feldman in view of Say and any of Charlton, Maley, or Hoenes, and further in view of Yamashita.

Feldman, Say, Charlton, Maley, and Hoenes are discussed above with respect to claims 1, 3, 6, 8-16, 17, 21, 23-31, and 35. As stated above, these references (alone or in any combination) fail to teach sensors having, for example, conductive tracks with the same width as working and second electrodes.

Yamashita is described above with respect to the rejection of claims 32 and 34. As stated above, Yamashita does not describe a first conductive track that is the same width as a working electrode and a second conductive track that is the same width as a second electrode. (i.e., a teaching that is missing from Say and Feldman, as explained above). Yamashita describes ion sensors but provides only cross-sectional views of individual electrodes. Yamashita does not teach incorporation of such electrodes with conductive tracks that are the same width.

For at least the foregoing reasons, the cited references fail to provide each and every limitation of the pending claims. Accordingly, applicants respectfully request withdrawal of the rejection.

CONCLUSION

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Office finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, reference number ADCI-073.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP

Date: September 27, 2011

By: /Edward J. Baba, Reg. No. 52,581/
Edward J. Baba
Registration No. 52,581

Date: September 27, 2011

By: /Isaac M. Rutenberg, Reg. No. 57,419/
Isaac M. Rutenberg
Registration No. 57,419

BOZICEVIC, FIELD & FRANCIS LLP
235 Montgomery St., 29th Floor
San Francisco, CA94104
Telephone: (415) 230-8100
Facsimile: (415) 230-5131